

**Translation**

**PATENT COOPERATION TREATY**

**PCT**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>PF16669</b>	<b>FOR FURTHER ACTION</b>	See Form PCT/IPEA/416
International application No. <b>PCT/JP2004/009672</b>	International filing date (day/month/year) <b>01.07.2004</b>	Priority date (day/month/year) <b>01.07.2003</b>
International Patent Classification (IPC) or national classification and IPC <b>B65G39/02, B65G13/00, B65G49/06, B65G49/07, H01L21/68</b>		
Applicant <b>IGUCHI KIKO CO., LTD.</b>		

1.	This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2.	This REPORT consists of a total of <u>4</u> sheets, including this cover sheet.
3.	This report is also accompanied by ANNEXES, comprising: a. <input checked="" type="checkbox"/> (sent to the applicant and to the International Bureau) a total of <u>11</u> sheets, as follows: <input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s))  _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4.	This report contains indications relating to the following items: <input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input type="checkbox"/> Box No. VIII Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/009672

## Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following \_\_\_\_\_ which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1, 2, 4, 6, 9, 10 as originally filed/furnished
- pages\* 3, 3/1, 5, 7, 7/1, 8, 11, 12 received by this Authority on 01.02.2005
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the claims:
- nos. 2, 3, 5, 6, 9, as originally filed/furnished
- nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19
- nos.\* 1, 8, 10 received by this Authority on 01.02.2005
- nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the drawings:
- sheets fig. 1, 2 as originally filed/furnished
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☒ The amendments have resulted in the cancellation of:
- ☐ the description, pages \_\_\_\_\_
- ☒ the claims, nos. 4, 7, 11
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/009672

**Box No. V** Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

Novelty (N)	Claims	1-3, 5, 6, 8-10	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1-3, 5, 6, 8-10	NO
Industrial applicability (IA)	Claims	1-3, 5, 6, 8-10	YES
	Claims		NO

## 2. Citations and explanations (Rule 70.7)

Document 1: JP 7-164078 A (Murata Machinery Ltd.), 27 June 1995 (Family: none)

Document 2: JP 11-11620 A (Kabushiki Kaisha Shinkuron), 19 January 1999 (Family: none)

Document 3: JP 2000-211717 A (Koyo Seiko Co., Ltd.), 2 August 2000 (Family: none)

Document 4: JP 2000-219308 A (SR Engineering Co., Ltd.), 8 August 2000, & US 6279716 B1

Document 5: Microfilm of the specification and drawings annexed to the request of Japanese Utility Model Application No. 11734/1971 (Laid-open No. 9160/1972) (Michio Kimura), 3 October 1972 (Family: none)

The inventions set forth in claims 1, 5, 6, and 10 do not involve an inventive step in the light of document 1, document 2, and document 3. Document 1 discloses a feature wherein a main unit, small balls, and a large ball are formed of a synthetic resin (see paragraph [0011]), and a person skilled in the art could easily conceive of using the polyimide disclosed in document 2 (see paragraph [0008]) as said synthetic resin. The mounting of a cover on a main unit and the use of a ball

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/009672

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
-----------	--

transfer unit in a conveyance system of a semiconductor manufacturing apparatus are standard practice in the art, as disclosed in document 3 (see lid (6) in fig. 2, paragraph [0020]).

The invention set forth in claims 2 and 3 does not involve an inventive step in the light of document 1, document 2, and document 3. Given that document 3 (paragraph [0009]) discloses the use of a ball transfer unit under conditions wherein a heavy load is applied or in a high-temperature environment, optimizing the characteristics of the material forming the ball transfer unit according to the conditions and environment in which said unit is used would merely require the exercise of the normal creative faculties of a person skilled in the art.

The invention set forth in claim 8 does not involve an inventive step in the light of document 1, document 2, document 3, and document 4. A person skilled in the art could easily conceive of employing the structure using an annular groove and a latching part, disclosed in document 4 (paragraph [0021]), as a cover mounting structure.

The invention set forth in claim 9 does not involve an inventive step in the light of document 1, document 2, document 3, and document 5. A person skilled in the art could easily conceive of adding the communicating hole disclosed in document 5 (fig. 1 to fig. 3) to a ball transfer unit.